

=> s dimethyl succinate/cn
L1 1 DIMETHYL SUCCINATE/CN

=> s dimethyl glutarate/cn
L2 1 DIMETHYL GLUTARATE/CN

=> s dimethyl adipate/cn
L3 1 DIMETHYL ADIPATE/CN

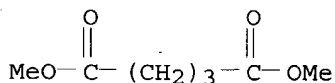
=> s l1 or l2 or l3
L4 3 L1 OR L2 OR L3

=> s 1-3
14425425 1
12897299 3
L5 2699485 1-3
(1(W)3)

=> \end
\END IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> d l4 1-3

L4 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN
RN 1119-40-0 REGISTRY
CN Pentanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Glutaric acid, dimethyl ester (6CI, 7CI, 8CI)
OTHER NAMES:
CN DBE 5
CN Dimethyl 1,3-propanedicarboxylate
CN **Dimethyl glutarate**
CN Dimethyl pentanedioate
CN Methyl glutarate
CN NSC 58578
FS 3D CONCORD
DR 111366-62-2
MF C7 H12 O4
CI COM
LC STN Files: ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CANCERLIT,
CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB,
DETERM*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS,
NIOSTIC, PIRA, PROMT, SPECINFO, TOXCENTER, ULIDAT, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

622 REFERENCES IN FILE CA (1907 TO DATE)
22 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
623 REFERENCES IN FILE CAPLUS (1907 TO DATE)
24 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN
RN 627-93-0 REGISTRY
CN Hexanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Adipic acid, dimethyl ester (6CI, 8CI)

OTHER NAMES:

CN DBE 6

CN **Dimethyl adipate**

CN Dimethyl hexanedioate

CN Methyl adipate

CN NSC 11213

FS 3D CONCORD

DR 111366-61-1

MF C8 H14 O4

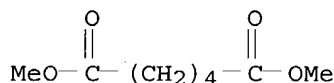
CI COM

LC STN Files: ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, CSNB, DETHERM*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1138 REFERENCES IN FILE CA (1907 TO DATE)

47 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1140 REFERENCES IN FILE CAPLUS (1907 TO DATE)

49 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN

RN 106-65-0 REGISTRY

CN Butanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Succinic acid, dimethyl ester (6CI, 8CI)

OTHER NAMES:

CN DBE 4

CN Dimethyl butanedioate

CN **Dimethyl succinate**

CN Methyl succinate

CN NSC 52209

FS 3D CONCORD

MF C6 H10 O4

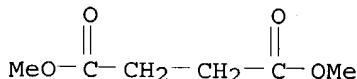
CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, CSNB, DDFU, DETHERM*, DIPPR*, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL, VTB

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1343 REFERENCES IN FILE CA (1907 TO DATE)

39 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1344 REFERENCES IN FILE CAPLUS (1907 TO DATE)
44 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s 1119-40-0/prep
'PREP' IS NOT A VALID FIELD CODE
L6 0 1119-40-0/PREP

=> file caplus	SINCE FILE	TOTAL
COST IN U.S. DOLLARS	ENTRY	SESSION
FULL ESTIMATED COST	29.14	29.35

FILE 'CAPLUS' ENTERED AT 16:08:26 ON 17 FEB 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 17 Feb 2004 VOL 140 ISS 8
FILE LAST UPDATED: 16 Feb 2004 (20040216/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 1119-40-0/prep
623 1119-40-0
3109528 PREP/RL
L7 78 1119-40-0/PREP
(1119-40-0 (L) PREP/RL)

=> s 627-93-0/prep
1140 627-93-0
3109528 PREP/RL
L8 226 627-93-0/PREP
(627-93-0 (L) PREP/RL)

=> s 106-65-0/prep
1344 106-65-0
3109528 PREP/RL
L9 220 106-65-0/PREP
(106-65-0 (L) PREP/RL)

=> s 17 or 18 19
MISSING OPERATOR L8 L9
The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

=> s 17 or 18 or 19
L10 421 L7 OR L8 OR L9

=> s caprolactam and l10
18908 CAPROLACTAM
L11 4 CAPROLACTAM AND L10

=> s 111 AND WASTE AND ALKALINE
334409 WASTE

103807 ALKALINE
L12 0 L11 AND WASTE AND ALKALINE

=> s l11 AND NITRIC ACID

141652 NITRIC
3779532 ACID
56329 NITRIC ACID
(NITRIC(W)ACID)

L13 1 L11 AND NITRIC ACID

=> s l11 AND NITRIC ACID AND DECOMP?

141652 NITRIC
3779532 ACID
56329 NITRIC ACID
(NITRIC(W)ACID)

576273 DECOMP?

L14 1 L11 AND NITRIC ACID AND DECOMP?

=> s l11 AND NITRIC ACID AND DECOMP? AND DISTIL?

141652 NITRIC
3779532 ACID
56329 NITRIC ACID
(NITRIC(W)ACID)

576273 DECOMP?

112407 DISTIL?

L15 1 L11 AND NITRIC ACID AND DECOMP? AND DISTIL?

=> D L11 1-4 IBIB ABS HITSTR

L11 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:376877 CAPLUS

DOCUMENT NUMBER: 138:369025

TITLE: Preparation of bidentate ligands for use in palladium
catalyzed carbonylation of ethylenically or
acetylenically unsaturated compounds

INVENTOR(S): Drent, Eit; Van Ginkel, Roelof; Van der Made, Renata
Helena

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij BV, Neth.

SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003040159	A2	20030515	WO 2002-EP12380	20021105
WO 2003040159	C1	20030731		
WO 2003040159	A3	20040108		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-348205P P 20011109
EP 2002-77923 A 20020718

OTHER SOURCE(S): CASREACT 138:369025; MARPAT 138:369025

AB Bidentate ligands, R1R2M1-R-M2R3R4, (wherein M1, M2, independently = P,
As, Sb; R1, R2, R3, R4, independently = substituted organic group and at
least one of R1, R2, R3 and R4 contains a tertiary carbon atom through
which the group is linked to M1 or M2; R = bridging group based on a
trimethylene group connecting M1 and M2 of which the middle carbon atom is

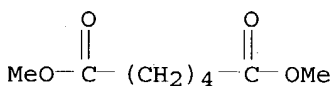
double bonded to a non-metal element chosen from group 14, 15 or 16 of the periodic table of elements) were prepared. For example, di-tert-butylphosphine is reacted with 3-chloro-2-chloromethyl-1-propene to give the corresponding bisphosphonium salt, which is treated with NaOH to give 66% 3-(di-tert-butylphosphino)-2-(di-tert-butylphosphinomethyl)-1-propene, (dtbpm). The prepared compds. are ligands in the palladium catalyzed carbonylation of ethylenically or acetylenically unsatd. compds. For example, 3-pentenitrile undergoes carbonylation in the presence of dtbpm and Pd(OAc)₂ to give the corresponding linear 5-cyanovaleric ester.

IT 627-93-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of bidentate ligands for use in palladium catalyzed carbonylation of ethylenically or acetylenically unsatd. compds., and subsequent reactivity of products of carbonylation)

RN 627-93-0 CAPLUS

CN Hexanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:146493 CAPLUS

DOCUMENT NUMBER: 138:187402

TITLE: Method for preparation of C4-6 dicarboxylic acid esters from alkali waste liquid generated in manufacturing **caprolactam**

INVENTOR(S): Chou, Hsien-Chun; Wang, Ke-Shun; Wu, Chung-Ru; Liu, Yao Chung; Liu, Yao-Chung

PATENT ASSIGNEE(S): Chunghua Hsing Enterprise Co., Ltd., Taiwan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003055303	A2	20030226	JP 2001-387321	20011220
US 2003045750	A1	20030306	US 2002-47835	20020114

PRIORITY APPLN. INFO.: TW 2001-90119851 A 20010814

AB An efficient process for recovering and manufacturing C4-6 dicarboxylic acids and esters thereof from alkali waste liquid generated in manufacturing **caprolactam** is provided. The process comprises (1) neutralization of the alkali waste liquid generated in manufacturing **caprolactam** with H₂SO₄ to adjust the pH, separation of the oil layer from the water layer, and addition of HNO₃ to the oil layer to convert organic substances into dicarboxylic acids and to obtain a solution of dicarboxylic acids, (2) concentration of the above solution to distill low b.p. monocarboxylic acids and HNO₃ in the first stage and concentration and decomposition of residual HNO₃ and nitro compds. in the second stage to obtain a crude concentrate mainly containing C4-6 dicarboxylic acids, (3) two-step esterification involving addition of C1-4 alkyl alcs. to the crude C4-6 dicarboxylic acid concentrate followed by obtaining a semiesterification intermediate product in the first stage and the obtaining a crude dicarboxylic acid ester product in the second stage, and (4) distillation of the crude dicarboxylic acid ester product to obtain a single or a mixture of dicarboxylic acid esters. Thus, an oil layer (120 g) containing formic acid 2.08, acetic acid 2.07, butyric acid 3.19, valeric acid 0.23, caproic acid 3.19, succinic acid 0.08, glutaric acid 0.85, adipic acid 10.15, 6-hydroxyhexanoic acid 15.07, H₂O 25.62, and others 35.24 weight% (obtained as described in step 1) was added portionwise at 30° over .apprx.20 min to 600 g 30% aqueous HNO₃, allowed to react at 30° for 30 min, 50° for 1 h, and 70° for 1 h, and concentrated until the temperature reached at 120°, followed by passing steam to drive out HNO₃ from the solution, stopping steam, and concentration of the resulting solution at

140° to obtain a concentrate (61.5 g) containing formic acid 0, acetic acid 0, butyric acid 0, valeric acid 0.29, caproic acid 0, succinic acid 14.27, glutaric acid 27.36, adipic acid 34.03, 6-hydroxyhexanoic acid 0.53, H₂O 0, NO₃- 0.045, and others 36.24 weight%. MeOH 100, the crude concentrate 50, and p-toluenesulfonic acid monohydrate 0.5 g were added to a glass flask fitted with a reflux condenser and allowed to react at 80° for 2 h for the first-stage esterification, followed by removing the reflux condenser, distilling residual MeOH and water formed, raising the temperature to 110°, gradually adding 200 g MeOH over 4 h for the second-stage esterification, and distilling unreacted MeOH and H₂O formed to give crude dicarboxylic acid ester product (53.5 g) containing succinic acid Me ester 14.13, glutaric acid Me ester 27.68, and adipic acid Me ester 32.64 weight%. The crude dicarboxylic acid ester product (50 g) was distilled at 4 Kpa (130 Torr) to collect the distillate at 110-190°. A clear mixture of C4-6 dicarboxylic acid Me ester (35.1 g) of high purity containing succinic acid Me ester 17.93, glutaric acid Me ester 37.58, and adipic acid Me ester 41.61 weight% was obtained.

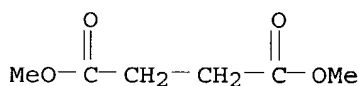
IT 106-65-0P, Succinic acid dimethyl ester 627-93-0P, Adipic acid dimethyl ester 1119-40-0P, Glutaric acid dimethyl ester

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP** (Preparation)

(preparation of C4-6 dicarboxylic acid esters from alkali waste liquid generated in manufacturing **caprolactam** by neutralization, oxidation with nitric acid, concentration, two-stage esterification with alkanols, and distillation)

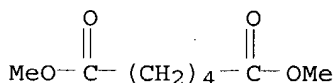
RN 106-65-0 CAPLUS

CN Butanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)



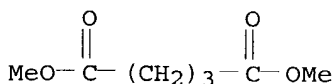
RN 627-93-0 CAPLUS

CN Hexanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)



RN 1119-40-0 CAPLUS

CN Pentanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1976:43400 CAPLUS

DOCUMENT NUMBER: 84:43400

TITLE: **Caprolactam** technology. Thermal oxidation of cyclohexanone

AUTHOR(S): Stanek, J.; Capek, A.; Ledvinova, M.

CORPORATE SOURCE: Chemopet. Koncernovy Podnik Spolana, Neratovice, Czech.

SOURCE: Polyamidy '75, Sb. Prednasek (1975), 24-30. Dum Tech. CVTS: Pardubice, Czech.

CODEN: 31WAAO

DOCUMENT TYPE: Conference

LANGUAGE: Czech

AB Acid impurities in tech. cyclohexanone (I) and its oxidation products by air at 100° were determined as Me esters by gas liquid chromatog. and mass

spectra. Me esters and their relative concns. (%) are given for tech. I and its oxidation products: valerate (2.1, 12.6), caproate (9.7, 14.1), 5-hexenoate/4-hexenoate (8.9, 1.9), glutarate (5.5, 13.5), adipate (50, 46.3), and 6-hydroxycaproate (5.8, -). An oxidation scheme was proposed.

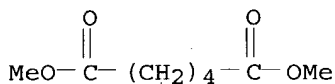
IT 627-93-0P 1119-40-0P

RL: PREP (Preparation)

(by oxidation of cyclohexanone)

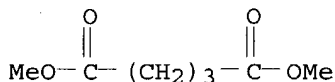
RN 627-93-0 CAPLUS

CN Hexanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)



RN 1119-40-0 CAPLUS

CN Pentanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1971:463062 CAPLUS

DOCUMENT NUMBER: 75:63062

TITLE: Reprocessing of an aqueous layer, formed during the production of **caprolactam**, into dimethyl esters of dicarboxylic acids

AUTHOR(S): Freidlin, G. N.; Golubko, L. A.; Glushkova, A. A.; Enyutina, T. M.; Romanova, L. G.; Sapol'kova, G. K.; Samoshina, T. F.; Boyarkin, M. A.

CORPORATE SOURCE: USSR

SOURCE: Khimicheskaya Promyshlennost (Moscow, Russian Federation) (1971), 47(6), 431-3
CODEN: KPRMAW; ISSN: 0023-110X

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The title aqueous layer, containing adipic 21, glutaric 5, and 2 oxalic acids 3%, and smaller amts. of cyclohexanol, cyclohexanone, esters and tar, was oxidized at 2.5 atm in 2 stages at 78-100° with HNO₃. The H₂O and HNO₃ were distilled in vacuo to give a melt containing 1.5-3.0% HNO₃ and 97% dicarboxylic acids comprising adipic 19-24, glutaric 42-55, succinic 25-33, and oxalic 0.2-4%. The melt was converted to Me esters at 200° with MeOH in 2 hr in an autoclave. Distillation in vacuo gave the Me esters in 92-4% purity, suitable for plasticizer use.

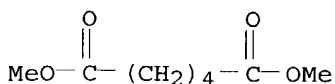
IT 627-93-0P 1119-40-0P

RL: PREP (Preparation)

(recovery of, in **caprolactam** manufacture)

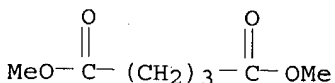
RN 627-93-0 CAPLUS

CN Hexanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)



RN 1119-40-0 CAPLUS

CN Pentanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)



Refine Search

Search Results -

Terms	Documents
L5 and distil\$6	2

Database:

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

L6 and decompos\$7

Refine Search

Recall Text

Clear

Interrupt

Search History

DATE: Tuesday, February 17, 2004 [Printable Copy](#) [Create Case](#)

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>			
<u>L6</u>	L5 and distil\$6	2	<u>L6</u>
<u>L5</u>	L4 and oxid\$8	2	<u>L5</u>
<u>L4</u>	L3 and nitric acid	2	<u>L4</u>
<u>L3</u>	L2 and waste	19	<u>L3</u>
<u>L2</u>	L1 and alkaline	249	<u>L2</u>
<u>L1</u>	caprolactam and dicarboxylate	555	<u>L1</u>

END OF SEARCH HISTORY

Hit List

Clear

Generate Collection

Print

Fwd Refs

Bkwd Refs

Generate OACS

Search Results - Record(s) 1 through 10 of 19 returned.☐ 1. Document ID: US 20040002434 A1**Using default format because multiple data bases are involved.**

L3: Entry 1 of 19

File: PGPB

Jan 1, 2004

PGPUB-DOCUMENT-NUMBER: 20040002434

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040002434 A1

TITLE: Bleach compositions containing metal bleach catalyst, and bleach activators and/or organic percarboxylic acids

PUBLICATION-DATE: January 1, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE- 47
Perkins, Christopher Mark	Cincinnati	OH	US	
Labeque, Regine	Bruxelles	OH	BE	
Williams, Barbara Kay	Cincinnati	OH	US	
Johnston, James Pyott	Brussels	OH	BE	
Kitko, David Johnathan	Cincinnati	OH	US	
Laurent, James Charles Theophile Roger Burckett-St.	Cincinnati		US	
Burns, Michael Eugene	Hamilton		US	

US-CL-CURRENT: [510/309](#); [510/310](#), [510/311](#), [510/314](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Drawings
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 2. Document ID: US 20030119698 A1

L3: Entry 2 of 19

File: PGPB

Jun 26, 2003

PGPUB-DOCUMENT-NUMBER: 20030119698

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030119698 A1

TITLE: Bleach compositions

PUBLICATION-DATE: June 26, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Busch, Daryle Hadley	Lawrence	KS	US	
Collinson, Simon Robert	Nottingham	KS	GB	
Hubin, Timothy Jay	McPherson	OH	US	
Perkins, Christopher Mark	Cincinnati	OH	US	
Labeque, Regine	Brussels	OH	BE	
Williams, Barbara Kay	West Chester	OH	US	
Johnston, James Pyott	Merchtem		BE	
Kitko, David Jonathan	Cincinnati		US	
Burckett-St. Laurent, James Charles Theophile Roger	Lasne		BE	
Burns, Michael Eugene	West Chester		US	

US-CL-CURRENT: [510/302](#); [510/311](#), [510/314](#), [510/376](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 3. Document ID: US 20030114331 A1

L3: Entry 3 of 19

File: PGPB

Jun 19, 2003

PGPUB-DOCUMENT-NUMBER: 20030114331

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030114331 A1

TITLE: Compositions for treating shoes and methods and articles employing same

PUBLICATION-DATE: June 19, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Baker, Keith Homer	Cincinnati	OH	US	
Siklosi, Michael Peter	Cincinnati	OH	US	
Na, Henry Cheng	Cincinnati	OH	US	
Strang, Janine Morgens	Cincinnati	OH	US	
Scheper, William Michael	Lawrenceburg	IN	US	
Sadlowski, Eugene Steven	Cincinnati	OH	US	
Becks, Vincent John	Liberty Township	OH	US	

US-CL-CURRENT: [510/276](#); [510/426](#), [510/475](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 4. Document ID: US 20030045750 A1

L3: Entry 4 of 19

File: PGPB

Mar 6, 2003

PGPUB-DOCUMENT-NUMBER: 20030045750
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030045750 A1

TITLE: Method for recovering and producing C4-C6 dicarboxylate from alkaline waste
solution generated in caprolactam preparation process

PUBLICATION-DATE: March 6, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Chou, Sien-Chun	Taipei		TW	
Wang, Edward K.S.	Taipei		TW	
Wu, Chung Ho	Taipei		TW	
Liu, Yaw Jong	Taipei		TW	
Chiang, Ping	Taipei		TW	

US-CL-CURRENT: 562/524; 203/35, 560/191

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 5. Document ID: US 20030041885 A1

L3: Entry 5 of 19

File: PGPB

Mar 6, 2003

PGPUB-DOCUMENT-NUMBER: 20030041885
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030041885 A1

TITLE: Acidic, phosphate-free plastic cleaner composition with reduced mild steel
equipment etch and method of cleaning plastic parts

PUBLICATION-DATE: March 6, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Held, Theodore D. III	Grosse Pointe Farms	MI	US	

US-CL-CURRENT: 134/36; 134/42

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 6. Document ID: US 20020198128 A1

L3: Entry 6 of 19

File: PGPB

Dec 26, 2002

PGPUB-DOCUMENT-NUMBER: 20020198128
PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020198128 A1

TITLE: Bleach compositions containing metal bleach catalyst, and bleach activators and/or organic percarboxylic acids

PUBLICATION-DATE: December 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Perkins, Christopher Mark	Cincinnati	OH	US	
Labeque, Regine	Bruxelles	OH	BE	
Williams, Barbara Kay	Cincinnati	OH	US	
Johnston, James Pyott	Brussels	OH	BE	
Kitko, David Johnathan	Cincinnati	OH	US	
Burckett-St Laurent, James Charles Theophile Roger	Cincinnati		US	
Burns, Michael Eugene	Hamilton		US	

US-CL-CURRENT: 510/310; 510/312, 510/313, 510/314

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWMC	Draw. D.
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 7. Document ID: US 20020119907 A1

L3: Entry 7 of 19

File: PGPB

Aug 29, 2002

PGPUB-DOCUMENT-NUMBER: 20020119907

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020119907 A1

TITLE: Compositions for treating shoes and methods and articles employing same

PUBLICATION-DATE: August 29, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Baker, Keith Homer	Cincinnati	OH	US	
Siklosi, Michael Peter	Cincinnati	OH	US	
Na, Henry Cheng	Cincinnati	OH	US	
Strang, Janine Morgens	Cincinnati	OH	US	
Haeggberg, Donna Jean	Cincinnati	OH	US	
Scheper, William Michael	Lawrenceburg	IN	US	
Sheets, Connie Lynn	Cincinnati	OH	US	
Tollens, Fernando Ray	Indian Hill	OH	US	
Murray, Michael Glen	South Lebanon	OH	US	
Creedon, Michael Timothy	Cincinnati	OH	US	
Wahl, Errol Hoffman	Cincinnati	OH	US	
Trinh, Toan	Maineville	OH	US	
Sadlowski, Eugene Steven	Cincinnati	OH	US	

Becks, Vincent John Liberty Township OH US

US-CL-CURRENT: 510/475; 510/476

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 8. Document ID: US 20020082188 A1

L3: Entry 8 of 19

File: PGPB

Jun 27, 2002

PGPUB-DOCUMENT-NUMBER: 20020082188

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020082188 A1

TITLE: Compositions for treating shoes and methods and articles employing same

PUBLICATION-DATE: June 27, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Baker, Keith Homer	Cincinnati	OH	US	
Siklosi, Michael Peter	Cincinnati	OH	US	
Na, Henry Cheng	Cincinnati	OH	US	
Strang, Janine Morgens	Cincinnati	OH	US	
Haeggberg, Donna Jean	Cincinnati	OH	US	
Scheper, William Michael	Lawrenceberg	IN	US	
Sheets, Connie Lynn	Cincinnati	OH	US	
Tollens, Fernando Ray	Indian Hill	OH	US	
Murray, Michael Glen	South Lebanon	OH	US	
Creedon, Michael Timothy	Cincinnati	OH	US	
Wahl, Errol Hoffman	Cincinnati	OH	US	
Trinh, Toan	Maineville	OH	US	
Sadlowski, Eugene Steven	Cincinnati	OH	US	
Becks, Vincent John	Township	OH	US	

US-CL-CURRENT: 510/475; 510/476, 510/477

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 9. Document ID: US 20020004473 A1

L3: Entry 9 of 19

File: PGPB

Jan 10, 2002

PGPUB-DOCUMENT-NUMBER: 20020004473

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020004473 A1

TITLE: Bleach compositions

PUBLICATION-DATE: January 10, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE- 47
Busch, Daryle Hadley	Lawrence	KS	US	
Collinson, Simon Robert	Lancashire	KS	GB	
Hubin, Timothy Jay	Eudora	OH	US	
Perkins, Christopher Mark	Cincinnati	OH	US	
Labeque, Regine	Bruxelles	OH	BE	
Williams, Barbara Kay	Cincinnati	OH	US	
Johnston, James Pyott	Brussels	OH	BE	
Kitko, David Johnathan	Cincinnati		US	
Burckett-St. Laurent, James Charles Theophile Roger	Cincinnati		US	
Burns, Michael Eugene	West Chester		US	

US-CL-CURRENT: 510/302; 510/311, 510/312, 510/376

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 10. Document ID: US 20010044401 A1

L3: Entry 10 of 19

File: PGPB

Nov 22, 2001

PGPUB-DOCUMENT-NUMBER: 20010044401

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010044401 A1

TITLE: Bleach compositions containing metal bleach catalyst, and bleach activators and/or organic percarboxylic acids

PUBLICATION-DATE: November 22, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE- 47
Perkins, Christopher Mark	Cincinnati	OH	US	
Labeque, Regine	Bruxelles	OH	BE	
Williams, Barbara Kay	Cincinnati	OH	US	
Johnston, James Pyott	Brussels	OH	BE	
Kitko, David Johnathan	Cincinnati	OH	US	
Burckett-St. Laurent, James Charles Theophile Roger	Cincinnati		US	
Burns, Michael Eugene	Hamilton		US	

US-CL-CURRENT: 510/367; 510/375, 510/376

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
-------	---------------------	-------	----------	-----------	---------------

Terms	Documents
L2 and waste	19

Display Format:

[Previous Page](#)

[Next Page](#)

[Go to Doc#](#)

Hit List

Clear

Generate Collection

Print

Fwd Refs

Bkwd Refs

Generate OACS

Search Results - Record(s) 11 through 19 of 19 returned.☐ 11. Document ID: US 6608015 B2**Using default format because multiple data bases are involved.**

L3: Entry 11 of 19

File: USPT

Aug 19, 2003

US-PAT-NO: 6608015

DOCUMENT-IDENTIFIER: US 6608015 B2

TITLE: Bleach compositions

DATE-ISSUED: August 19, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
Busch; Daryle Hadley	Lawrence	KS			
Collinson; Simon Robert	Nottingham				GB
Hubin; Timothy Jay	McPherson	KS			
Perkins; Christopher Mark	Cincinnati	OH			
Labeque; Regine	Brussels				BE
Williams; Barbara Kay	West Chester	OH			
Johnston; James Pyott	Merchtem				BE
Kitko; David Jonathan	Cincinnati	OH			
Burckett-St. Laurent; James Charles Theophile Roger	Lasne				BE
Burns; Michael Eugene	West Chester	OH			

US-CL-CURRENT: 510/311; 510/376, 510/500

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachment	Claims	KMC	Draw D
------	-------	----------	-------	--------	----------------	------	-----------	----------	------------	--------	-----	--------

☐ 12. Document ID: US 6566318 B2

L3: Entry 12 of 19

File: USPT

May 20, 2003

US-PAT-NO: 6566318

DOCUMENT-IDENTIFIER: US 6566318 B2

TITLE: Bleach compositions containing metal bleach catalyst, and bleach activators and/or organic percarboxylic acids

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWMC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 13. Document ID: US 6399557 B2

L3: Entry 13 of 19

File: USPT

Jun 4, 2002

US-PAT-NO: 6399557

DOCUMENT-IDENTIFIER: US 6399557 B2

TITLE: Bleach compositions containing metal bleach catalyst, and bleach activators and/or organic percarboxylic acids

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWMC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 14. Document ID: US 6387862 B2

L3: Entry 14 of 19

File: USPT

May 14, 2002

US-PAT-NO: 6387862

DOCUMENT-IDENTIFIER: US 6387862 B2

TITLE: Bleach compositions

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWMC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 15. Document ID: US 6306812 B1

L3: Entry 15 of 19

File: USPT

Oct 23, 2001

US-PAT-NO: 6306812

DOCUMENT-IDENTIFIER: US 6306812 B1

TITLE: Bleach compositions containing metal bleach catalyst, and bleach activators and/or organic percarboxylic acids

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWMC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 16. Document ID: US 6218351 B1

L3: Entry 16 of 19

File: USPT

Apr 17, 2001

US-PAT-NO: 6218351

DOCUMENT-IDENTIFIER: US 6218351 B1

**** See image for Certificate of Correction ****

TITLE: Bleach compositions

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWMC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 17. Document ID: US 5992631 A

L3: Entry 17 of 19

File: USPT

Nov 30, 1999

US-PAT-NO: 5992631

DOCUMENT-IDENTIFIER: US 5992631 A

TITLE: Assembly of self-standing pouches

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sentences	Attachments	Claims	KWIC	Draw D
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	--------

☐ 18. Document ID: US 5403424 A

L3: Entry 18 of 19

File: USPT

Apr 4, 1995

US-PAT-NO: 5403424

DOCUMENT-IDENTIFIER: US 5403424 A

TITLE: Process for the manufacture of multi-layer composites with sensitive outer surfaces

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sentences	Attachments	Claims	KWIC	Draw D
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	--------

☐ 19. Document ID: US 20030045750 A1, JP 2003055303 A

L3: Entry 19 of 19

File: DWPI

Mar 6, 2003

DERWENT-ACC-NO: 2003-531535

DERWENT-WEEK: 200350

COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: Recovery and production of 4-6 Carbon dicarboxylates by treating alkaline waste solution with sulfuric acid, and allowing valuable substances contained in organic phase to be firstly oxidized and converted into dicarboxylic acids

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sentences	Attachments	Claims	KWIC	Draw D
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	--------

Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
-------	---------------------	-------	----------	-----------	---------------

Terms	Documents
L2 and waste	19

Display Format: [Previous Page](#)[Next Page](#)[Go to Doc#](#)